



217/782-2113

PERMIT DENIAL

CERTIFIED MAIL

153441

December 9, 1982

The Sherman Williams Co.
11541 South Champlain Avenue
Chicago, Illinois 60628

EPA Region 5 Records Ctr.



355910

Attention: Stanley R. Fryzel

<u>Application No.:</u>	72100425
<u>I.D. No.:</u>	031600AHO
<u>Applicant's Designation:</u>	RPM-04
<u>Received:</u>	November 12, 1982
<u>Operation of:</u>	Zone Tank Reactor #4 and Auxiliaries
<u>Location:</u>	11541 South Champlain Avenue, Chicago, Illinois

Gentlemen:

This Agency has reviewed your Application for Operating Permit for the above referenced project. The permit application is DENIED because the Illinois Environmental Protection Act, Section 9, and the Illinois Pollution Control Board Rules and Regulations, Chapter 2: Air Pollution, Rule(s) 103(b)(6)(A) might be violated.

The following are specific reasons why the Act and the Rules and Regulations may not be met:

1. Pursuant to Rule 103(b)(6)(A), an operating permit application must show compliance with the Act and applicable Board regulations. This operating permit application does not make this showing for the same reasons as accompanying construction permit application 82110038 which the Agency has also refused to issue.

In addition, pursuant to Rule 103(b)(6)(B), no operating permit application may be granted for emission sources or air pollution control equipment unless it "... has been constructed or modified in accordance with all conditions in the construction permit, where applicable"

2. This operating permit application is denied only for the zone tank reactor #4 and auxiliaries and for the above-mentioned deficiency, based upon your application of November 12, 1982. This action does not change the status or the expiration date of the operating permit granted earlier.



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The Agency will be pleased to re-evaluate your permit application on receipt of your written request and the necessary information and documentation to correct or clarify the deficiencies noted above. Two copies of this information must be submitted and should reference the application and I.D. numbers assigned above. The revised application will be considered filed on the date that the Agency receives your written request.

If you have any questions concerning this denial, please contact Paul Purseglove at 217/782-2113.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Bharat Mathur".

Bharat Mathur, P.E.
Manager, Permit Section
Division of Air Pollution Control

BM:PMP:sd/5910c/4-5 PMP 12/9/82

cc: Region 1

A¹² T
12-12-82

NUMBER : 3

**WITHHELD
DOCUMENT**



STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

1.

APPLICATION FOR A PERMIT (A) <input checked="" type="checkbox"/> CONSTRUCT <input type="checkbox"/> OPERATE NAME OF EQUIPMENT TO BE CONSTRUCTED OR OPERATED <u>Zone Tank Reactor #4 and Auxiliaries</u> (B)		FOR AGENCY USE ONLY I. D. NO. <u>031 600A#4</u> PERMIT NO. <u>72 10 0425</u> DATE <u>11-12-82</u>	
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1a. NAME OF OWNER: <u>The Sherwin Williams Co.</u>		2a. NAME OF OPERATOR: <u>The Sherwin Williams Co.</u>	
1b. STREET ADDRESS OF OWNER: <u>101 Prospect Ave., N.W.</u>		2b. STREET ADDRESS OF OPERATOR: <u>11541 S. Champlain Ave.</u>	
1c. CITY OF OWNER: <u>Cleveland</u>		2c. CITY OF OPERATOR: <u>Chicago</u>	
1d. STATE OF OWNER: <u>Ohio</u>	1e. ZIP CODE: <u>44115</u>	2d. STATE OF OPERATOR: <u>Illinois</u>	2e. ZIP CODE: <u>60628</u>

3a. NAME OF CORPORATE DIVISION OR PLANT: <u>Chicago Site</u>		3b. STREET ADDRESS OF EMISSION SOURCE: <u>11541 S. Champlain Ave.</u>		
3c. CITY OF EMISSION SOURCE: <u>Chicago</u>	3d. LOCATED WITHIN CITY LIMITS: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	3e. TOWNSHIP:	3f. COUNTY: <u>Cook</u>	3g. ZIP CODE: <u>60628</u>

4. ALL CORRESPONDENCE TO: (NAME OF INDIVIDUAL) <u>Stanley R. Fryzel</u>		5. TELEPHONE NUMBER FOR AGENCY TO CALL: <u>(312) 821-3028</u>	
6. ADDRESS FOR CORRESPONDENCE: (CHECK ONLY ONE) <input type="checkbox"/> OWNER: <input checked="" type="checkbox"/> OPERATOR <input type="checkbox"/> EMISSION SOURCE		7. YOUR ID NUMBER FOR THIS APPLICATION: (C) <u>RPM-04</u>	

8. THE UNDERSIGNED HEREBY MAKES APPLICATION FOR A PERMIT AND CERTIFIES THAT THE STATEMENTS CONTAINED HEREIN ARE TRUE AND CORRECT, AND FURTHER CERTIFIES THAT ALL PREVIOUSLY SUBMITTED INFORMATION REFERENCED IN THIS APPLICATION REMAINS TRUE, CORRECT AND CURRENT. BY AFFIXING HIS SIGNATURE HERETO HE FURTHER CERTIFIES THAT HE IS AUTHORIZED TO EXECUTE THIS APPLICATION.

AUTHORIZED SIGNATURE(S): (D)

BY <u>J.B. Baron</u> SIGNATURE	11/21/82 DATE	BY <u>A. D. Childs</u> SIGNATURE	11/21/82 DATE
J. B. Baron TYPED OR PRINTED NAME OF SIGNER		A. D. Childs TYPED OR PRINTED NAME OF SIGNER	
Mgr. Chicago Resin Manufacturing TITLE OF SIGNER		Vice President and General Counsel and Corporate Secretary TITLE OF SIGNER	

IEBA - DAPC - SPFL

(A) THIS FORM IS TO PROVIDE THE AGENCY WITH GENERAL INFORMATION ABOUT THE EQUIPMENT TO BE CONSTRUCTED OR OPERATED. THIS FORM MAY ONLY BE USED TO REQUEST ONE TYPE OF PERMIT - CONSTRUCTION OR OPERATION - AND NOT BOTH.

(B) CLEARLY IDENTIFY THE GENERIC NAME OF THE EQUIPMENT TO BE CONSTRUCTED OR OPERATED. SUCH IDENTIFICATION WILL APPEAR ON THE PERMIT WHICH MAY BE ISSUED PURSUANT TO THIS APPLICATION. THIS FORM MUST BE ACCOMPANIED BY THE APPLICABLE ADDENDA.

(C) PROVIDE A NUMBER IN ITEM 7 ABOVE WHICH YOU WOULD LIKE THE AGENCY TO USE FOR IDENTIFICATION OF YOUR EQUIPMENT. YOUR IDENTIFICATION NUMBER WILL BE REFERENCED IN ALL CORRESPONDENCE, RELATIVE TO THIS APPLICATION, FROM THIS AGENCY. YOUR IDENTIFICATION NUMBER MUST NOT EXCEED TEN (10) CHARACTERS.

(D) THIS APPLICATION MUST BE SIGNED IN ACCORDANCE WITH PCB REGS., CHAPTER 2, PART 1, RULE 103(a)(4) OR 103(b)(5) WHICH STATES: "ALL APPLICATIONS AND SUPPLEMENTS THERETO SHALL BE SIGNED BY THE OWNER AND OPERATOR OF THE EMISSION SOURCE OR AIR POLLUTION CONTROL EQUIPMENT, OR THEIR AUTHORIZED AGENT, AND SHALL BE ACCOMPANIED BY EVIDENCE OF AUTHORITY TO SIGN THE APPLICATION."

IF THE OWNER OR OPERATOR IS A CORPORATION, SUCH CORPORATION MUST HAVE ON FILE WITH THE AGENCY A CERTIFIED COPY OF A RESOLUTION OF THE CORPORATION'S BOARD OF DIRECTORS AUTHORIZING THE PERSONS SIGNING THIS APPLICATION TO CAUSE OR ALLOW THE CONSTRUCTION OR OPERATION OF THE EQUIPMENT TO BE COVERED BY THE PERMIT.

9. AN OPERATING PERMIT APPLICATION MUST BE SUBMITTED IN DUPLICATE.
A CONSTRUCTION PERMIT APPLICATION FOR CONSTRUCTION IN COOK COUNTY OUTSIDE OF THE CORPORATE LIMITS OF CHICAGO MUST BE SUBMITTED IN QUADRUPLICATE.
A CONSTRUCTION PERMIT APPLICATION IN ALL OTHER LOCATIONS MUST BE SUBMITTED IN TRIPPLICATE.

10. THE APPLICANT SHALL SUBMIT A PLOT PLAN AND MAP SHOWING DISTANCES TO THE NEAREST BOUNDARY OF THE PROPERTY ON WHICH THE OPERATION IS LOCATED AND DISTANCES TO THE NEAREST RESIDENCES, LODGINGS, NURSING HOMES, HOSPITALS, SCHOOLS AND COMMERCIAL AND MANUFACTURING ESTABLISHMENTS. IF SUCH A PLOT PLAN AND MAP HAS ALREADY BEEN SUBMITTED, INDICATE THE ASSOCIATED AGENCY I.D. NUMBER AND PERMIT APPLICATION NUMBER. AGENCY I.D. NO. 0 3 1 6 0 0 A H O APPLICATION NO. 0 2 1 0 0 4 2 5

11. THE APPLICANT SHALL SUBMIT A PROCESS FLOW DIAGRAM DEPICTING ALL EMISSION SOURCES AND ALL AIR POLLUTION CONTROL EQUIPMENT COVERED BY THIS PERMIT APPLICATION. THE DIAGRAM SHALL INCLUDE LABELS FOR EACH EMISSION SOURCE AND EACH ITEM OF AIR POLLUTION CONTROL EQUIPMENT, AND SHALL SET FORTH MAXIMUM FLOW RATES FOR (1) ALL PROCESSING EQUIPMENT, (2) ALL AIR POLLUTION CONTROL EQUIPMENT, (3) ALL EMISSION SOURCES, AND (4) ALL STACKS AND VENTS. NUMBER OF SHEETS: _____ DRAWING NUMBER(S): _____

12. FOR EACH EMISSION SOURCE AND EACH ITEM OF AIR POLLUTION CONTROL EQUIPMENT IDENTIFIED ON THE PROCESS FLOW DIAGRAM, THE APPLICANT SHALL COMPLETE AND SUBMIT THE APPLICABLE PERMIT APPLICATION FORMS. THE FLOW DIAGRAM SHALL INDICATE THROUGH WHICH STACK OR VENT AN EMISSION SOURCE OR ITS RELATED AIR POLLUTION CONTROL EQUIPMENT IS EXHAUSTED. IF IT IS EXHAUSTED WITHIN A BUILDING, SO INDICATE.

13. IF THIS IS AN APPLICATION FOR AN OPERATING PERMIT, AND THE APPLICANT IS INCORPORATING BY REFERENCE PREVIOUSLY GRANTED INSTALLATION OR CONSTRUCTION PERMITS, HE SHALL COMPLETE FORM APC-210, ENTITLED "DATA AND INFORMATION -- INCORPORATION BY REFERENCE."

14. IF THIS IS AN APPLICATION FOR AN OPERATING PERMIT, AND THE STARTUP OF ANY EMISSION SOURCE DESCRIBED BY THIS APPLICATION PRODUCES AN AIR CONTAMINANT IN EXCESS OF APPLICABLE STANDARDS, THE APPLICANT MAY REQUEST PERMISSION TO EXCEED SUCH STANDARDS BY COMPLETING FORM APC-203, ENTITLED "OPERATION DURING STARTUP."

15. IF THIS IS AN APPLICATION FOR AN OPERATING PERMIT, AND THE APPLICANT IS APPLYING FOR PERMISSION TO OPERATE AN EMISSION SOURCE DURING MALFUNCTIONS OR BREAKDOWNS PURSUANT TO PCB REGS., CHAPTER 2, RULE 105, THE APPLICANT MAY REQUEST SUCH PERMISSION BY COMPLETING FORM APC-204, ENTITLED "OPERATION DURING MALFUNCTION AND BREAKDOWN."

16. IF THIS IS AN APPLICATION FOR AN OPERATING PERMIT AND ALL OR ANY PART OF THE PROCESS MUST BE CONTROLLED OR MODIFIED TO COMPLY WITH APPLICABLE REGULATIONS, THE APPLICANT SHALL COMPLETE FORM APC-202, ENTITLED "COMPLIANCE PROGRAM & PROJECT COMPLETION SCHEDULE."

17. IF THIS IS AN APPLICATION FOR AN OPERATING PERMIT, DOES THE OPERATION COVERED BY THIS APPLICATION REQUIRE AN EPISODE ACTION PLAN? ☐ YES ☐ NO

18. WAS EACH EMISSION SOURCE COVERED BY THIS APPLICATION, AS OF APRIL 14, 1972, IN COMPLIANCE WITH THE "RULES AND REGULATIONS GOVERNING THE CONTROL OF AIR POLLUTION," ADOPTED BY THE FORMER AIR POLLUTION CONTROL BOARD AND CONTINUED EFFECTIVE PURSUANT TO SECTION 49(c) OF THE ENVIRONMENTAL PROTECTION ACT? ☐ YES ☐ NO

New Construction

19. IF THIS IS AN APPLICATION FOR AN OPERATING PERMIT, WAS THE OPERATION THE SUBJECT OF A VARIANCE PETITION FILED WITH THE ILLINOIS POLLUTION CONTROL BOARD ON OR BEFORE JUNE 13, 1972? ☐ YES ☐ NO

IF "YES," CITE PCB NUMBER(S): _____ DATE OF BOARD ORDER: _____

HAD THE APPLICANT ON OR BEFORE APRIL 14, 1972, COMMENCED CONSTRUCTION OF EQUIPMENT OR MODIFICATIONS SUFFICIENT TO ACHIEVE COMPLIANCE WITH THE APPLICABLE LIMITATIONS OF THE "RULES AND REGULATIONS GOVERNING THE CONTROL OF AIR POLLUTION," ADOPTED BY THE FORMER AIR POLLUTION CONTROL BOARD AND CONTINUED EFFECTIVE PURSUANT TO SECTION 49(c) OF THE ENVIRONMENTAL PROTECTION ACT? ☐ YES ☐ NO

IF "NO," EXPLAIN IN DETAIL AND MARK YOUR EXPLANATION AS EXHIBIT D.

TOTAL NUMBER OF PAGES IN EXHIBIT D: _____

20. IF THIS IS AN APPLICATION FOR AN OPERATING PERMIT, THE APPLICANT SHALL SUBMIT AN ESTIMATE OF THE MAXIMUM ONE-HOUR AMOUNTS OF PARTICULATE MATTER, SULFUR DIOXIDE, CARBON MONOXIDE, OXIDES OF NITROGEN, AND ORGANIC MATERIAL EMITTED FROM ALL SOURCES LOCATED ON THE PLANT OR PREMISES. THIS ESTIMATE SHALL INCLUDE ALL EMISSION SOURCES LOCATED ON THE APPLICANT'S PREMISES AND NOT JUST THE EMISSION SOURCES DESCRIBED IN THIS APPLICATION.

MATERIAL	MAXIMUM ONE-HOUR AMOUNTS	MATERIAL	MAXIMUM ONE-HOUR AMOUNTS	MATERIAL	MAXIMUM ONE-HOUR AMOUNTS
PARTICULATE MATTER	_____ LB	SULFUR DIOXIDE	_____ LB	NITROGEN OXIDES	_____ LB
ORGANIC MATERIAL	_____ LB	CARBON MONOXIDE	_____ LB		

21. WHAT IS THE SIZE (IN ACRES) OF APPLICANT'S PREMISES?

135

22. LIST AND IDENTIFY ALL FORMS, EXHIBITS, AND OTHER INFORMATION SUBMITTED AS PART OF THIS APPLICATION. PLEASE _____ AND STATE THE TOTAL NUMBER OF PAGES IN THIS APPLICATION.



STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

APPLICATION FOR A PERMIT (A) <input type="checkbox"/> CONSTRUCT <input checked="" type="checkbox"/> OPERATE Zone Tank Reactor #4 and Auxiliaries		FOR AGENCY USE ONLY I. D. NO. _____ PERMIT NO. _____ DATE _____	
NAME OF EQUIPMENT TO BE CONSTRUCTED OR OPERATED _____ (B)			

1a. NAME OF OWNER: The Sherwin Williams Co.		2a. NAME OF OPERATOR: The Sherwin Williams Co.	
1b. STREET ADDRESS OF OWNER: 101 Prospect Ave., N.W.		2b. STREET ADDRESS OF OPERATOR: 11541 S. Champlain Ave.	
1c. CITY OF OWNER: Cleveland		2c. CITY OF OPERATOR: Chicago	
1d. STATE OF OWNER: Ohio	1e. ZIP CODE: 44115	2d. STATE OF OPERATOR: Illinois	2e. ZIP CODE: 60628

3a. NAME OF CORPORATE DIVISION OR PLANT: Chicago Site		3b. STREET ADDRESS OF EMISSION SOURCE: 11541 S. Champlain Ave.	
3c. CITY OF EMISSION SOURCE: Chicago	3d. LOCATED WITHIN CITY LIMITS: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	3e. TOWNSHIP:	3f. COUNTY: Cook
		3g. ZIP CODE: 60628	

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BY <u>J. B. Baron</u> <u>1/28/82</u> SIGNATURE DATE TYPED OR PRINTED NAME OF SIGNER <u>Mgr. Chicago Resin Manufacturing</u> TITLE OF SIGNER	BY <u>A. D. Childs</u> <u>2/1/82</u> SIGNATURE DATE TYPED OR PRINTED NAME OF SIGNER <u>Vice President and General Counsel and</u> <u>Corporate Secretary</u> TITLE OF SIGNER
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17. IF THIS IS AN APPLICATION FOR AN OPERATING PERMIT, DOES THE OPERATION COVERED BY THIS APPLICATION REQUIRE AN EPISODE ACTION PLAN? ☐ YES ☐ NO Episode Action Plan on File

18. WAS EACH EMISSION SOURCE COVERED BY THIS APPLICATION, AS OF APRIL 14, 1972, IN COMPLIANCE WITH THE "RULES AND REGULATIONS GOVERNING THE CONTROL OF AIR POLLUTION," ADOPTED BY THE FORMER AIR POLLUTION CONTROL BOARD AND CONTINUED EFFECTIVE PURSUANT TO SECTION 49(c) OF THE ENVIRONMENTAL PROTECTION ACT? ☐ YES ☐ NO

New Construction

19. IF THIS IS AN APPLICATION FOR AN OPERATING PERMIT, WAS THE OPERATION THE SUBJECT OF A VARIANCE PETITION FILED WITH THE ILLINOIS POLLUTION CONTROL BOARD ON OR BEFORE JUNE 13, 1972? ☐ YES ☒ NO

IF "YES," CITE PCB NUMBER(S): _____ DATE OF BOARD ORDER: _____

HAD THE APPLICANT ON OR BEFORE APRIL 14, 1972, COMMENCED CONSTRUCTION OF EQUIPMENT OR MODIFICATIONS SUFFICIENT TO ACHIEVE COMPLIANCE WITH THE APPLICABLE LIMITATIONS OF THE "RULES AND REGULATIONS GOVERNING THE CONTROL OF AIR POLLUTION," ADOPTED BY THE FORMER AIR POLLUTION CONTROL BOARD AND CONTINUED EFFECTIVE PURSUANT TO SECTION 49(c) OF THE ENVIRONMENTAL PROTECTION ACT? ☐ YES ☐ NO

IF "NO," EXPLAIN IN DETAIL AND MARK YOUR EXPLANATION AS EXHIBIT D. Not applicable

TOTAL NUMBER OF PAGES IN EXHIBIT D: _____

20. IF THIS IS AN APPLICATION FOR AN OPERATING PERMIT, THE APPLICANT SHALL SUBMIT AN ESTIMATE OF THE MAXIMUM ONE-HOUR AMOUNTS OF PARTICULATE MATTER, SULFUR DIOXIDE, CARBON MONOXIDE, OXIDES OF NITROGEN, AND ORGANIC MATERIAL EMITTED FROM ALL SOURCES LOCATED ON THE PLANT OR PREMISES. THIS ESTIMATE SHALL INCLUDE ALL EMISSION SOURCES LOCATED ON THE APPLICANT'S PREMISES AND NOT JUST THE EMISSION SOURCES DESCRIBED IN THIS APPLICATION.

MATERIAL	MAXIMUM ONE-HOUR AMOUNTS	MATERIAL	MAXIMUM ONE-HOUR AMOUNTS	MATERIAL	MAXIMUM ONE-HOUR AMOUNTS
PARTICULATE MATTER	<u>33.8</u> LB	SULFUR DIOXIDE	<u>272.5</u> LB	NITROGEN OXIDES	<u>90.8</u> LB
ORGANIC MATERIAL	<u>303.3</u> LB	CARBON MONOXIDE	<u>9.6</u> LB		

21. WHAT IS THE SIZE (IN ACRES) OF APPLICANT'S PREMISES?
135

22. LIST AND IDENTIFY ALL FORMS, EXHIBITS, AND OTHER INFORMATION SUBMITTED AS PART OF THIS APPLICATION. PLEASE NUMBER EVERY PAGE AND STATE THE TOTAL NUMBER OF PAGES IN THIS APPLICATION.



STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

Page # 5

DATA AND INFORMATION
INCORPORATION BY REFERENCE

FOR AGENCY USE ONLY

1. NAME OF OWNER: Sherwin-Williams Company	2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):
3. STREET ADDRESS OF EMISSION SOURCE: 11541 S. Champlain Ave.	4. CITY OF EMISSION SOURCE: Chicago
5. IDENTIFICATION NUMBER: 03 1 6 00 AHO	

6a. APPLICATION NUMBER: 0 210 0425	b. IDENTIFICATION ON FLOW DIAGRAM:
c. <input type="checkbox"/> CONSTRUCTION OF <input checked="" type="checkbox"/> OPERATION Resin Plant	
d. DOES THE DATA & INFORMATION PREVIOUSLY SUBMITTED REMAIN TRUE, CORRECT, CURRENT & COMPLETE? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
e. IF "NO," SUBMIT THE APPLICABLE FORMS OR CLEARLY STATE THE DATA & INFORMATION WHICH IS NO LONGER TRUE, CORRECT, CURRENT AND COMPLETE.	

7a. APPLICATION NUMBER:	b. IDENTIFICATION ON FLOW DIAGRAM:
c. <input type="checkbox"/> CONSTRUCTION OF <input type="checkbox"/> OPERATION	
d. DOES THE DATA & INFORMATION PREVIOUSLY SUBMITTED REMAIN TRUE, CORRECT, CURRENT & COMPLETE? <input type="checkbox"/> YES <input type="checkbox"/> NO	
e. IF "NO," SUBMIT THE APPLICABLE FORMS OR CLEARLY STATE THE DATA & INFORMATION WHICH IS NO LONGER TRUE, CORRECT, CURRENT AND COMPLETE.	

8a. APPLICATION NUMBER:	b. IDENTIFICATION ON FLOW DIAGRAM:
c. <input type="checkbox"/> CONSTRUCTION OF <input type="checkbox"/> OPERATION	
d. DOES THE DATA & INFORMATION PREVIOUSLY SUBMITTED REMAIN TRUE, CORRECT, CURRENT & COMPLETE? <input type="checkbox"/> YES <input type="checkbox"/> NO	
e. IF "NO," SUBMIT THE APPLICABLE FORMS OR CLEARLY STATE THE DATA & INFORMATION WHICH IS NO LONGER TRUE, CORRECT, CURRENT AND COMPLETE.	

9a. APPLICATION NUMBER:	b. IDENTIFICATION ON FLOW DIAGRAM:
c. <input type="checkbox"/> CONSTRUCTION OF <input type="checkbox"/> OPERATION	
d. DOES THE DATA & INFORMATION PREVIOUSLY SUBMITTED REMAIN TRUE, CORRECT, CURRENT & COMPLETE? <input type="checkbox"/> YES <input type="checkbox"/> NO	
e. IF "NO," SUBMIT THE APPLICABLE FORMS OR CLEARLY STATE THE DATA & INFORMATION WHICH IS NO LONGER TRUE, CORRECT, CURRENT AND COMPLETE.	



STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

RESIN PLANT MODIFICATION

DATA AND INFORMATION

SOLVENT PROCESSING - HIGH TEMPERATURE

PROCESS EMISSION SOURCE(A)

ZONE TANK REACTOR #4 - ITEM G

FOR AGENCY USE ONLY

1. NAME OF PLANT OWNER:

The Sherwin-Williams Company

2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):

3. STREET ADDRESS OF EMISSION SOURCE:

11541 S. Champlain Avenue

4. CITY OF EMISSION SOURCE:

Chicago, Illinois 60628**GENERAL INFORMATION**

5. NAME OF PROCESS:

Varnish-Resin Plant

6. NAME OF EMISSION SOURCE EQUIPMENT:

Zone Tank Reactor #4

7. EMISSION SOURCE EQUIPMENT MANUFACTURER:

D. Well Fabricating & Eng. Company

8. MODEL NUMBER:

Custom

9. SERIAL NUMBER:

10. FLOW DIAGRAM DESIGNATIONS OF EMISSION SOURCES DESCRIBED ON THIS FORM (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):

Item G - Solvent Processing

11. CLEARLY IDENTIFY ANY SIMILAR SOURCES AT THE PLANT OR PREMISES NOT COVERED BY THIS FORM (IF SUCH SOURCES ARE COVERED BY FORMS CONTAINED IN OTHER APPLICATIONS, ALSO IDENTIFY THOSE APPLICATIONS):

See incorporation by reference

12. AVERAGE OPERATION TIME OF EMISSION SOURCE:

24

HRS/DAY

5

DAYS/WK

25

WKS/YR

13. PERCENT OF ANNUAL THROUGHPUT:

DEC/FEB **12½** % MAR/MAY **12½** % JUN/AUG **12½** % SEP/NOV **12½** %**Solvent Processing****RAW MATERIAL INFORMATION**

14.	NAMES OF RAW MATERIALS(B)	Wt. %	MAXIMUM RATE PER IDENTICAL SOURCE	AVERAGE RATE PER IDENTICAL SOURCE
a.	Oils	54%	1620 LB/HR	LB/HR
b.	Polyols	14%	420 LB/HR	LB/HR
c.	Acids	27%	810 LB/HR	LB/HR
d.	Solvents	5%	150 LB/HR	LB/HR
e.			LB/HR	LB/HR
f.			LB/HR	LB/HR

(A) THIS DATA AND INFORMATION FORM IS TO BE COMPLETED FOR ANY STATIONARY EMISSION SOURCE OTHER THAN A FUEL COMBUSTION EMISSION SOURCE OR AN INCINERATOR. A FUEL COMBUSTION EMISSION SOURCE IS ANY FURNACE, BOILER, OR SIMILAR EQUIPMENT USED FOR THE PRIMARY PURPOSE OF PRODUCING HEAT OR POWER BY INDIRECT HEAT TRANSFER. FOR SUCH AN EMISSION SOURCE, COMPLETE "DATA AND INFORMATION -- FUEL COMBUSTION EMISSION SOURCE," FORM APC-240. AN INCINERATOR IS A COMBUSTION APPARATUS IN WHICH REFUSE IS BURNED. FOR SUCH AN EMISSION SOURCE, COMPLETE "DATA AND INFORMATION -- INCINERATOR," FORM APC-250.

(B) COMPOSITIONS OF RAW MATERIALS MUST BE DETAILED TO THE EXTENT NECESSARY TO DETERMINE THE NATURE AND QUANTITY OF POTENTIAL EMISSIONS.

ITEM G - SOLVENT PROCESSING - HIGH TEMPERATURE

PRODUCT INFORMATION

15.	NAMES OF PRODUCTS	MAXIMUM RATE PER IDENTICAL SOURCE	AVERAGE RATE PER IDENTICAL SOURCE
a.	Alkyd Resin Varnish	3000 LB/HR	1230 LB/HR
b.		LB/HR	LB/HR
c.		LB/HR	LB/HR
d.		LB/HR	LB/HR

WASTE MATERIAL INFORMATION

16.	NAMES OF WASTE MATERIALS	MAXIMUM RATE PER IDENTICAL SOURCE	AVERAGE RATE PER IDENTICAL SOURCE
a.	Water	1920 LB/HR	960 LB/HR
b.	Entrained Vegetable Oils	16 LB/HR	8 LB/HR
c.	Anhydrides	32 LB/HR	16 LB/HR
d.		LB/HR	LB/HR

TO ITEM B CONDENSER

MAXIMUM EMISSIONS FROM EACH IDENTICAL SOURCE*

CONTAMINANT	CONCENTRATION OR EMISSION RATE		METHOD USED TO DETERMINE CONCENTRATION OR EMISSION RATE
17. PARTICULATE MATTER	a. GR/SCF	b. LB/HR	c.
18. CARBON MONOXIDE	a. PPM (VOL)	b. LB/HR	c.
19. NITROGEN OXIDES	a. PPM (VOL)	b. LB/HR	c.
20. ORGANIC MATERIAL	a. PPM (VOL)	b. LB/HR	c.
21. SULFUR DIOXIDE	a. PPM (VOL)	b. LB/HR	c.
22. OTHER (SPECIFY)	a. PPM (VOL)	b. LB/HR	c.

EXHAUST DATA*

23. FLOW DIAGRAM DESIGNATIONS OF EXITS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):	24. GAS FLOW RATE THROUGH EACH EXIT: ACFM	25. EXIT GAS TEMPERATURE: °F
26. EXIT DIAMETER: FT	27. EXIT HEIGHT ABOVE GRADE: FT	28. MAXIMUM HEIGHT OF NEARBY BUILDINGS: FT
		29. EXIT DISTANCE FROM NEAREST PLANT BOUNDARY: FT

*NOTE: COMPLETE THESE SECTIONS ONLY IF EMISSIONS ARE EXHAUSTED WITHOUT CONTROL EQUIPMENT.



STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

8.

RESIN PLANT MODIFICATION

DATA AND INFORMATION

SOLVENT PROCESSING - HIGH TEMPERATURE

AIR POLLUTION CONTROL EQUIPMENT

ITEM B - CONDENSER

FOR AGENCY USE ONLY

ITEM K - VENT

1. NAME OF OWNER: <u>The Sherwin-Williams Company</u>	2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER): .
3. STREET ADDRESS OF EMISSION SOURCE: <u>11541 S. Champlain Avenue</u>	4. CITY OF EMISSION SOURCE: <u>Chicago, Illinois 60628</u>

ADSORPTION SYSTEM

1. FLOW DIAGRAM DESIGNATIONS OF ADSORPTION SYSTEMS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):		
2. MANUFACTURER:	3. MODEL NAME AND NUMBER:	
4. ADSORBANT:	5. NUMBER OF BEDS PER SYSTEM:	6. ADSORBANT WEIGHT PER BED: _____ LB
7. METHOD OF REGENERATION: <input type="checkbox"/> REPLACEMENT <input type="checkbox"/> STEAM <input type="checkbox"/> OTHER (SPECIFY _____)		
8. TIME ON LINE BEFORE REGENERATION: _____ MIN/BED	9. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE): _____ %	

AFTERBURNER

1. FLOW DIAGRAM DESIGNATIONS OF AFTERBURNERS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):	
2. MANUFACTURER:	3. MODEL NAME AND NUMBER:
4. FUEL: <input type="checkbox"/> GAS <input type="checkbox"/> OIL (_____ % SULFUR)	5. BURNERS PER AFTERBURNER _____ @ _____ BTU/HR EACH
6. INLET GAS TEMPERATURE: _____ °F	7. OPERATING TEMPERATURE OF COMBUSTION CHAMBER: _____ °F
8. COMBUSTION CHAMBER DIMENSIONS: LENGTH _____ IN; CROSS SECTION _____ IN x _____ IN; OR _____ IN DIA	
9. CATALYST USED? <input type="checkbox"/> YES <input type="checkbox"/> NO	10. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE): PARTICULATE _____ % GASEOUS _____ %

ITEM B - CONDENSER UE-2

CONDENSER

1. FLOW DIAGRAM DESIGNATIONS OF CONDENSERS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201): **ITEM B**2. MANUFACTURER: **PROCESS ENGINEERING & MACHINE**3. MODEL NAME AND NUMBER: **#3448**

4. TYPE OF COOLANT AND COOLANT FLOW PER CONDENSER:

☒ WATER (_____ GPM) ☐ AIR (_____ SCFM) ☐ OTHER (TYPE _____ FLOW RATE _____)5. COOLANT TEMPERATURES: INLET **55** °F OUTLET **75** °F6. GAS TEMPERATURES: **220**
INLET **370** °F OUTLET **100** °F7. HEAT EXCHANGE AREA PER CONDENSER: **1,000** FT²8. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE):
No Flow (No non-condensibles other than that contained in equipment on start-up)

CYCLONE

1. FLOW DIAGRAM DESIGNATIONS OF CYCLONES OR MULTIPLE CYCLONES DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):

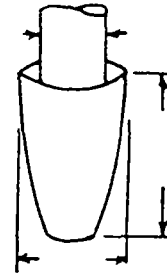
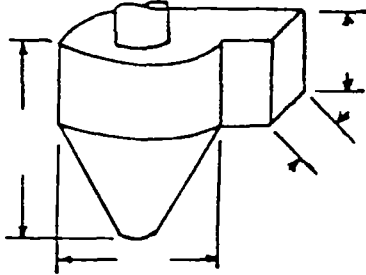
2. MANUFACTURER:

3. MODEL NAME AND NUMBER:

4. NUMBER OF CYCLONES IN EACH MULTIPLE CYCLONE:

5. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE):

6. DIMENSION THE APPROPRIATE SKETCH (IN INCHES) OR PROVIDE A DRAWING WITH EQUIVALENT INFORMATION:



ELECTRICAL PRECIPITATOR

1. FLOW DIAGRAM DESIGNATIONS OF ELECTRICAL PRECIPITATORS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):

2. MANUFACTURER:

3. MODEL NAME AND NUMBER:

4. COLLECTING ELECTRODE AREA PER CONTROL DEVICE:

FT²

5. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN RESULTS):

FILTER

1. FLOW DIAGRAM DESIGNATIONS OF FILTERS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):

2. MANUFACTURER:

3. MODEL NAME AND NUMBER:

4. FILTERING AREA PER CONTROL DEVICE:

FT²

5. FILTERING MATERIAL:

6. CLEANING:

☐ SHAKER ☐ REVERSE AIR ☐ PULSE AIR ☐ PULSE JET ☐ OTHER (SPECIFY _____)

7. GAS COOLING:

☐ BLEED-IN AIR (_____ SCFM) ☐ WATER SPRAY (_____ GPM) ☐ DUCT (LENGTH _____ FT; DIA _____ IN) ☐ OTHER (SPECIFY _____)

8. INLET GAS:

TEMPERATURE _____ °F; DEW POINT _____ °F

9. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE):

SCRUBBER

1. FLOW DIAGRAM DESIGNATIONS OF SCRUBBERS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):	
2. MANUFACTURER:	3. MODEL NAME AND NUMBER:
4. SCRUBBER TYPE:	
<input type="checkbox"/> HIGH ENERGY (GAS STREAM PRESSURE DROP _____ IN H ₂ O)	
<input type="checkbox"/> PACKED (PACKING TYPE _____; PACKING SIZE _____ IN; PACKED HEIGHT _____ IN)	
<input type="checkbox"/> SPRAY (NUMBER OF NOZZLES _____; NOZZLE PRESSURE _____ PSIG)	
<input type="checkbox"/> OTHER (SPECIFY _____ ATTACH DESCRIPTION AND SKETCH WITH DIMENSIONED DETAILS)	
5. SCRUBBER GEOMETRY:	
LENGTH IN DIRECTION OF GAS FLOW _____ IN; CROSS-SECTION _____ IN X _____ IN OR _____ IN DIA; <input type="checkbox"/> CROSS FLOW <input type="checkbox"/> COUNTER FLOW	
6. LIQUID FLOW RATE INTO SCRUBBER: _____ GPM	7. CHEMICAL COMPOSITION OF SCRUBBANT:
8. INLET GAS TEMPERATURE: _____ °F	9. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE): PARTICULATE _____ % GASEOUS _____ %

ITEM K - VENT

OTHER TYPES OF CONTROL EQUIPMENT

1. FLOW DIAGRAM DESIGNATION OF CONTROL EQUIPMENT DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201): ITEM K		
2. GENERIC NAME OF CONTROL EQUIPMENT: Vent	3. MANUFACTURER: -	4. MODEL NAME AND NUMBER: -
5. ATTACH DESCRIPTION AND SKETCH OF CONTROL EQUIPMENT WITH DIMENSIONED DETAILS AND FLOW RATES. -	6. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE): PARTICULATE <u>0</u> % GASEOUS <u>0</u> %	

CONTROL OCCURS IN ITEM B CONDENSER

VENT - UE-1A

MAXIMUM EMISSIONS FROM EACH IDENTICAL EXIT

CONTAMINANT	CONCENTRATION OR EMISSION RATE		METHOD USED TO DETERMINE CONCENTRATION OR EMISSION RATE	
1. PARTICULATE MATTER	a. GR/SCF	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	c.	When manufacturing via solvent method, the condenser is in use and is operated at atmospheric pressure - See Calculation
2. CARBON MONOXIDE	a. PPM (VOL)	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	c.	
3. NITROGEN OXIDES	a. PPM (VOL)	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	c.	
4. ORGANIC MATERIAL X	a. PPM (VOL)	b. 0.56 <input checked="" type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	c.	
5. SULFUR DIOXIDE	a. PPM (VOL)	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	c.	
6. OTHER (SPECIFY)	a. PPM (VOL)	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	c.	

VENT - UE-1A

EXHAUST DATA

1. FLOW DIAGRAM DESIGNATIONS OF EXITS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201): UE-1A		2. GAS FLOW RATE THROUGH EACH EXIT: 0-2 ACFM	3. EXIT GAS TEMPERATURE: 90 °F
4. EXIT DIAMETER: 2"	5. EXIT HEIGHT ABOVE GRADE: 65' FT	6. MAXIMUM HEIGHT OF NEARBY BUILDINGS: 56 FT	7. EXIT DISTANCE FROM NEAREST PLANT BOUNDARY: 150 FT

SOLVENT PROCESSING - HIGH TEMPERATURE

EMISSIONS FROM UE-1A

UE-1A - Processing proceeds for an average of 18 hours (12 hr. min. - 30 hr. max.). A solvent (typically xylene) is used to drive the polymerization to completion by stripping and condensing the water of reaction. The water is separated from the solvent and the solvent is returned to the kettle. This all proceeds under atmospheric pressure. Minor amounts of inert gases (non-condensables) evolve from the batch via UE-1A at about 90°F after passing thru the vent condenser (Item B).

Flow 0-2 cfm @ atmospheric pressure, inert gases saturated with xylene @ 90°F, xylene vapor pressure @ 90°F = 13 mm Hg.

Max. per hour

$$2 \text{ SCFM } \left(\frac{60 \text{ min.}}{\text{hour}} \right) \left(\frac{13 \text{ mm}}{760 \text{ mm}} \right) \left(\frac{1 \text{ lb.mole}}{387 \text{ cu.ft}} \right) \left(\frac{106 \text{ lb.}}{1 \# \text{ mole}} \right) = 0.56 \text{ lb/hr.}$$

After all the water of reaction is removed and the batch is completed it is dropped to the thinning tank prior to filtering.



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2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

12.

RESIN PLANT MODIFICATION

DATA AND INFORMATION

SOLVENT PROCESS - LOW TEMPERATURE

PROCESS EMISSION SOURCE (A)

ZONE TANK REACTOR #4 - ITEM G

FOR AGENCY USE ONLY

1. NAME OF PLANT OWNER:

The Sherwin-Williams Company

2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):

3. STREET ADDRESS OF EMISSION SOURCE:

11541 S. Champlain Avenue

4. CITY OF EMISSION SOURCE:

Chicago, Illinois 60628

GENERAL INFORMATION

5. NAME OF PROCESS:

Varnish Resin Plant

6. NAME OF EMISSION SOURCE EQUIPMENT:

Zone Tank Reactor #4

7. EMISSION SOURCE EQUIPMENT MANUFACTURER:

D. Well Fabricating & Engineering

8. MODEL NUMBER:

Custom

9. SERIAL NUMBER:

10. FLOW DIAGRAM DESIGNATIONS OF EMISSION SOURCES DESCRIBED ON THIS FORM (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):

ITEM G - SOLVENT PROCESSING - LOW TEMPERATURE

11. CLEARLY IDENTIFY ANY SIMILAR SOURCES AT THE PLANT OR PREMISES NOT COVERED BY THIS FORM (IF SUCH SOURCES ARE COVERED BY FORMS CONTAINED IN OTHER APPLICATIONS, ALSO IDENTIFY THOSE APPLICATIONS):

See incorporation by reference

12. AVERAGE OPERATION TIME OF EMISSION SOURCE:

24 HRS/DAY

5 DAYS/WK

25 WKS/YR

13. PERCENT OF ANNUAL THROUGHPUT:

DEC/FEB 12½% MAR/MAY 12½% JUN/AUG 12½% SEP/NOV 12½%

RAW MATERIAL INFORMATION

14.

NAMES OF RAW MATERIALS (B)

MAXIMUM RATE PER
IDENTICAL SOURCE

AVERAGE RATE PER
IDENTICAL SOURCE

a.

Monomers

23%

690 LB/HR

LB/HR

b.

Intermediate Alkyds

27%

810 LB/HR

LB/HR

c.

Solvents

50%

1500 LB/HR

LB/HR

d.

LB/HR

LB/HR

e.

LB/HR

LB/HR

f.

LB/HR

LB/HR

(A) THIS DATA AND INFORMATION FORM IS TO BE COMPLETED FOR ANY STATIONARY EMISSION SOURCE OTHER THAN A FUEL COMBUSTION EMISSION SOURCE OR AN INCINERATOR. A FUEL COMBUSTION EMISSION SOURCE IS ANY FURNACE, BOILER, OR SIMILAR EQUIPMENT USED FOR THE PRIMARY PURPOSE OF PRODUCING HEAT OR POWER BY INDIRECT HEAT TRANSFER. FOR SUCH AN EMISSION SOURCE, COMPLETE "DATA AND INFORMATION -- FUEL COMBUSTION EMISSION SOURCE," FORM APC-240. AN INCINERATOR IS A COMBUSTION APPARATUS IN WHICH REFUSE IS BURNED. FOR SUCH AN EMISSION SOURCE, COMPLETE "DATA AND INFORMATION -- INCINERATOR," FORM APC-250.

(B) COMPOSITIONS OF RAW MATERIALS MUST BE DETAILED TO THE EXTENT NECESSARY TO DETERMINE THE NATURE AND QUANTITY OF POTENTIAL EMISSIONS.

ZONE TANK REACTOR #4

PRODUCT INFORMATION ITEM G - SOLVENT PROCESS - LOW TEMP.

15.	NAMES OF PRODUCTS	MAXIMUM RATE PER IDENTICAL SOURCE	AVERAGE RATE PER IDENTICAL SOURCE
a.	Monomer Modified Alkyd Resin	3000 LB/HR	1230 LB/HR
b.		LB/HR	LB/HR
c.		LB/HR	LB/HR
d.		LB/HR	LB/HR

WASTE MATERIAL INFORMATION

16.	NAMES OF WASTE MATERIALS	MAXIMUM RATE PER IDENTICAL SOURCE	AVERAGE RATE PER IDENTICAL SOURCE
a.	None	LB/HR	LB/HR
b.		LB/HR	LB/HR
c.		LB/HR	LB/HR
d.		LB/HR	LB/HR

TO ITEM C - CONDENSER

MAXIMUM EMISSIONS FROM EACH IDENTICAL SOURCE*

CONTAMINANT	CONCENTRATION OR EMISSION RATE		METHOD USED TO DETERMINE CONCENTRATION OR EMISSION RATE
7. PARTICULATE MATTER	a. GR/SCF	b. LB/HR	c.
8. CARBON MONOXIDE	a. PPM (VOL)	b. LB/HR	c.
9. NITROGEN OXIDES	a. PPM (VOL)	b. LB/HR	c.
10. ORGANIC MATERIAL	a. PPM (VOL)	b. LB/HR	c.
11. SULFUR DIOXIDE	a. PPM (VOL)	b. LB/HR	c.
12. OTHER (SPECIFY)	a. PPM (VOL)	b. LB/HR	c.

EXHAUST DATA*

FLOW DIAGRAM DESIGNATIONS OF EXITS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):		24. GAS FLOW RATE THROUGH EACH EXIT: ACFM	25. EXIT GAS TEMPERATURE: °F
13. EXIT DIAMETER: FT	27. EXIT HEIGHT ABOVE GRADE: FT	28. MAXIMUM HEIGHT OF NEARBY BUILDINGS: FT	29. EXIT DISTANCE FROM NEAREST PLANT BOUNDARY: FT

NOTE: COMPLETE THESE SECTIONS ONLY IF EMISSIONS ARE EXHAUSTED WITHOUT CONTROL EQUIPMENT.



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ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

14.

RESIN PLANT MODIFICATION
DATA AND INFORMATION

FOR AGENCY USE ONLY

SOLVENT PROCESSING - LOW TEMPERATURE
AIR POLLUTION CONTROL EQUIPMENT
ITEM C - CONDENSER

ITEM K - VENT

1. NAME OF OWNER: The Sherwin-Williams Company	2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):
3. STREET ADDRESS OF EMISSION SOURCE: 11541 S. Champlain Avenue	4. CITY OF EMISSION SOURCE: Chicago, Illinois 60628

ADSORPTION SYSTEM

1. FLOW DIAGRAM DESIGNATIONS OF ADSORPTION SYSTEMS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):		
2. MANUFACTURER:	3. MODEL NAME AND NUMBER:	
4. ADSORBANT:	5. NUMBER OF BEDS PER SYSTEM:	6. ADSORBANT WEIGHT PER BED: _____ LB
7. METHOD OF REGENERATION: <input type="checkbox"/> REPLACEMENT <input type="checkbox"/> STEAM <input type="checkbox"/> OTHER (SPECIFY _____)		
8. TIME ON LINE BEFORE REGENERATION: _____ MIN/BED	9. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE): _____ %	

AFTERBURNER

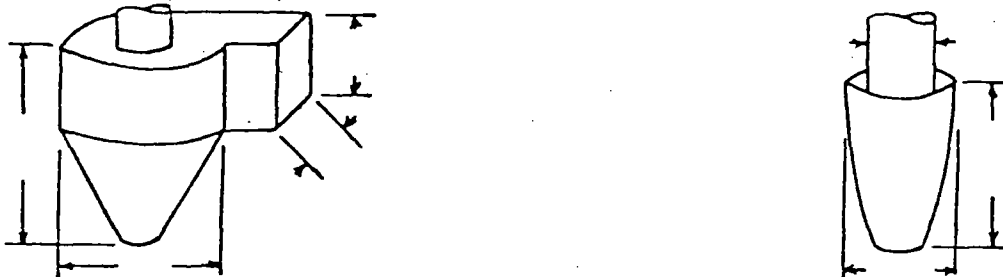
1. FLOW DIAGRAM DESIGNATIONS OF AFTERBURNERS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):	
2. MANUFACTURER:	3. MODEL NAME AND NUMBER:
4. FUEL: <input type="checkbox"/> GAS <input type="checkbox"/> OIL (_____ % SULFUR)	5. BURNERS PER AFTERBURNER _____ @ _____ BTU/HR EACH
6. INLET GAS TEMPERATURE: _____ °F	7. OPERATING TEMPERATURE OF COMBUSTION CHAMBER: _____ °F
8. COMBUSTION CHAMBER DIMENSIONS: LENGTH _____ IN; CROSS SECTION _____ IN x _____ IN; OR _____ IN DIA	
9. CATALYST USED? <input type="checkbox"/> YES <input type="checkbox"/> NO	10. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE): PARTICULATE _____ % GASEOUS _____ %

ITEM C - CONDENSER UE-3

CONDENSER

1. FLOW DIAGRAM DESIGNATIONS OF CONDENSERS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):		ITEM C	
2. MANUFACTURER: Processing Engineering & Machine		3. MODEL NAME AND NUMBER: 3018	
4. TYPE OF COOLANT AND COOLANT FLOW PER CONDENSER: <input checked="" type="checkbox"/> WATER (_____ GPM) <input type="checkbox"/> AIR (_____ SCFM) <input type="checkbox"/> OTHER (TYPE _____ FLOW RATE _____)			
5. COOLANT TEMPERATURES: INLET 55 °F OUTLET 75 °F		6. GAS TEMPERATURES: INLET 220/260 °F OUTLET 100 °F	
7. HEAT EXCHANGE AREA PER CONDENSER: 500 ft ²		8. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE): No Flow (No non-condensibles other than that contained in equipment on start-up)	

CYCLONE

1. FLOW DIAGRAM DESIGNATIONS OF CYCLONES OR MULTIPLE CYCLONES DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):	
2. MANUFACTURER:	3. MODEL NAME AND NUMBER:
4. NUMBER OF CYCLONES IN EACH MULTIPLE CYCLONE:	5. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE):
6. DIMENSION THE APPROPRIATE SKETCH (IN INCHES) OR PROVIDE A DRAWING WITH EQUIVALENT INFORMATION:	
	

ELECTRICAL PRECIPITATOR

1. FLOW DIAGRAM DESIGNATIONS OF ELECTRICAL PRECIPITATORS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):	
2. MANUFACTURER:	3. MODEL NAME AND NUMBER:
4. COLLECTING ELECTRODE AREA PER CONTROL DEVICE: ft ²	5. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN RESULTS):

FILTER

1. FLOW DIAGRAM DESIGNATIONS OF FILTERS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):	
2. MANUFACTURER:	3. MODEL NAME AND NUMBER:
4. FILTERING AREA PER CONTROL DEVICE: ft ²	5. FILTERING MATERIAL:
6. CLEANING: <input type="checkbox"/> SHAKER <input type="checkbox"/> REVERSE AIR <input type="checkbox"/> PULSE AIR <input type="checkbox"/> PULSE JET <input type="checkbox"/> OTHER (SPECIFY _____)	
7. GAS COOLING: <input type="checkbox"/> BLEED-IN AIR (_____ SCFM) <input type="checkbox"/> WATER SPRAY (_____ GPM) <input type="checkbox"/> DUCT (LENGTH _____ FT; DIA _____ IN) <input type="checkbox"/> OTHER (SPECIFY _____)	
8. INLET GAS: TEMPERATURE _____ °F; DEW POINT _____ °F	9. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE):

SCRUBBER

1. FLOW DIAGRAM DESIGNATIONS OF SCRUBBERS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):	
2. MANUFACTURER:	3. MODEL NAME AND NUMBER:
4. SCRUBBER TYPE:	
<input type="checkbox"/> HIGH ENERGY (GAS STREAM PRESSURE DROP _____ IN H ₂ O)	
<input type="checkbox"/> PACKED (PACKING TYPE _____; PACKING SIZE _____ IN; PACKED HEIGHT _____ IN)	
<input type="checkbox"/> SPRAY (NUMBER OF NOZZLES _____; NOZZLE PRESSURE _____ PSIG)	
<input type="checkbox"/> OTHER (SPECIFY _____ ATTACH DESCRIPTION AND SKETCH WITH DIMENSIONED DETAILS)	
5. SCRUBBER GEOMETRY:	
LENGTH IN DIRECTION OF GAS FLOW _____ IN; CROSS-SECTION _____ IN X _____ IN OR _____ IN DIA; <input type="checkbox"/> CROSS FLOW <input type="checkbox"/> COUNTER FLOW	
6. LIQUID FLOW RATE INTO SCRUBBER: _____ GPM	7. CHEMICAL COMPOSITION OF SCRUBBANT:
8. INLET GAS TEMPERATURE: _____ °F	9. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE): PARTICULATE _____ % GASEOUS _____ %

ITEM K - VENT

OTHER TYPES OF CONTROL EQUIPMENT

1. FLOW DIAGRAM DESIGNATION OF CONTROL EQUIPMENT DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201): ITEM K		
2. GENERIC NAME OF CONTROL EQUIPMENT: VENT	3. MANUFACTURER:	4. MODEL NAME AND NUMBER:
5. ATTACH DESCRIPTION AND SKETCH OF CONTROL EQUIPMENT WITH DIMENSIONED DETAILS AND FLOW RATES.	6. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE): PARTICULATE _____ % GASEOUS _____ %	

Control occurs in
Item C - Condenser

VENT UE-1A

MAXIMUM EMISSIONS FROM EACH IDENTICAL EXIT

CONTAMINANT	CONCENTRATION OR EMISSION RATE		METHOD USED TO DETERMINE CONCENTRATION OR EMISSION RATE
1. PARTICULATE MATTER	a. GR/SCF	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	When manufacturing via solvent method, the condenser is in use and is operated at atmospheric pressure - See Calculation.
2. CARBON MONOXIDE	a. PPM (VOL)	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	
3. NITROGEN OXIDES	a. PPM (VOL)	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	
4. ORGANIC MATERIAL X	a. PPM (VOL)	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	
5. SULFUR DIOXIDE	a. PPM (VOL)	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	
6. OTHER (SPECIFY)	a. PPM (VOL)	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	

VENT UE-1A

EXHAUST DATA

1. FLOW DIAGRAM DESIGNATIONS OF EXITS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201): UE-1A		2. GAS FLOW RATE THROUGH EACH EXIT: 0-2 ACFM	3. EXIT GAS TEMPERATURE: 90 °F
4. EXIT DIAMETER: 2"	5. EXIT HEIGHT ABOVE GRADE: 65 FT	6. MAXIMUM HEIGHT OF NEARBY BUILDINGS: 56 FT	7. EXIT DISTANCE FROM NEAREST PLANT BOUNDARY: 150 FT

SOLVENT PROCESSING - LOW TEMPERATURE

EMISSIONS FROM UE-1A

UE-1A - Processing proceeds at atmospheric pressure for an average of 18 hours (16 hr. min. - 24 hr. max.). Xylene is used to maintain a steady reflux throughout the polymerization. The condensed solvent is returned to the reactor. Minor amounts of inert gas (non-condensables) evolve from the batch via UE-1A at about 90°F after passing thru the vent condenser (ITEM C).

Flow 0-2 cfm at atmospheric pressure, inert gas saturated with xylene at 90°F. Xylene vapor pressure at 90°F is 13 mm Hg.

Max. per hour

$$2 \text{ CFM } \left(\frac{60 \text{ min.}}{\text{hour}} \right) \left(\frac{13 \text{ mm}}{760 \text{ mm}} \right) \left(\frac{1 \text{ lb.mole}}{387 \text{ cu.ft}} \right) \left(\frac{106 \text{ lb.}}{1 \# \text{ mole}} \right) = 0.56 \text{ lb/hr.}$$

After the polymerization is completed, the batch is dropped to a prefilter tank prior to filtering.



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18.

RESIN PLANT ADDITION

PROCESS EMISSION SOURCE ADDENDUM

TANK

ITEM D - CONDENSER RECEIVER

FOR AGENCY USE ONLY

1. NAME OF OWNER:

The Sherwin-Williams Company

2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):

3. STREET ADDRESS OF EMISSION SOURCE:

11541 S. Champlain Avenue

4. CITY OF EMISSION SOURCE:

Chicago, Illinois 60628

TANK INFORMATION

5. NAME OF TANK MANUFACTURER:

Custom

6. DESIGNATION OF TANK:

ITEM D

7. SERIAL NUMBER:

8. CAPACITY:

170 Gallons

9. TANK USE:

Receive condensing liquids from Items B & C

10. NUMBER OF SAME CAPACITY TANKS STORING SAME MATERIAL:

11. TANK SHAPE:

☐ HORIZONTAL

☒ CYLINDRICAL

☐ SPHERICAL

☐ OTHER(SPECIFY) _____

12. TANK DIAMETER:

FT

13. TANK HEIGHT:

FT

14. TANK LENGTH:

FT

15. STATUS:

☐ EXISTING

☐ ALTERATION

16. TANK TYPE:

☐ PRESSURE

☐ FIXED ROOF

☐ FLOATING ROOF

☐ OTHER(SPECIFY) _____

17. SEAL:

☐ SINGLE

☐ DOUBLE

☐ OTHER (SPECIFY) _____

18. AVERAGE DISTANCE FROM TOP OF TANK SHELL TO LIQUID:

FT.

19. SHELL TYPE:

☐ RIVETED

☐ WELDED

☐ OTHER(SPECIFY) _____

20. PAINT COLOR:

VENT VALVE DATA

TYPE OF VENT

NUMBER
OF VENTS

PRESSURE SETTING

DISCHARGE VENTED TO
(ATMOSPHERE, FLARE, ETC.)

21. COMBINATION

a.

b.

PSIG

c.

22. PRESSURE

a.

b.

PSIG

c.

23. VACUUM

a.

b.

PSIG

c.

24. OPEN

a. 1

b.

0 PSIG

c. To Item K Breather Only

FOR AGENCY USE ONLY

MATERIAL TO BE STORED

25. MATERIAL: Xylene and Water	26. DENSITY: 54.2 LB/FT ³	27. VAPOR PRESSURE AT 70°F: 7mm PSIA
--	--	--

RECEIVER

STORAGE CONDITIONS

28. STORAGE TEMPERATURE: Indoors MINIMUM 60 °F MAXIMUM 90 °F	29. TANK TURN OVER PER YEAR: <input type="checkbox"/> BBLS/ <input type="checkbox"/> GALS/
30. MAXIMUM FILLING RATE: <input type="checkbox"/> BBLS/DAY <input type="checkbox"/> GALS/DAY	31. AVERAGE THROUGHPUT: <input type="checkbox"/> BBLS/DAY <input type="checkbox"/> GALS/DAY
32. PRESSURE EQUALIZERS USED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	33. PERMANENT SUBMERGED LOADING PIPE USED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
34. VAPOR LOSS CONTROL DEVICE? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

IF VAPOR LOSS CONTROL DEVICE IS USED, COMPLETE "DATA & INFORMATION -- AIR POLLUTION CONTROL EQUIPMENT," (FORM APC-263), AS PART OF THIS APPLICATION.



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RESIN PLANT ADDITION
PROCESS EMISSION SOURCE ADDENDUM

FOR AGENCY USE ONLY

TANK

(2) PREFILTER TANKS - ITEM M

1. NAME OF OWNER: The Sherwin-Williams Company	2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):
3. STREET ADDRESS OF EMISSION SOURCE: 11541 S. Champlain Avenue	4. CITY OF EMISSION SOURCE: Chicago, Illinois 60628

TANK INFORMATION

5. NAME OF TANK MANUFACTURER: Imperial Steel Tank Company	6. DESIGNATION OF TANK: Item M-1 and M-2	
7. SERIAL NUMBER:	8. CAPACITY: 10,000 Gallon	
9. TANK USE: Prefilter Tanks	10. NUMBER OF SAME CAPACITY TANKS STORING SAME MATERIAL: (2)	
11. TANK SHAPE: <input type="checkbox"/> HORIZONTAL <input checked="" type="checkbox"/> CYLINDRICAL <input type="checkbox"/> SPHERICAL <input type="checkbox"/> OTHER(SPECIFY) _____		
12. TANK DIAMETER: FT	13. TANK HEIGHT: FT	14. TANK LENGTH: FT
15. STATUS: New <input type="checkbox"/> EXISTING <input type="checkbox"/> ALTERATION	16. TANK TYPE: <input type="checkbox"/> PRESSURE <input type="checkbox"/> FIXED ROOF <input type="checkbox"/> FLOATING ROOF <input type="checkbox"/> OTHER(SPECIFY) _____	
17. SEAL: <input type="checkbox"/> SINGLE <input type="checkbox"/> DOUBLE <input type="checkbox"/> OTHER (SPECIFY) _____	18. AVERAGE DISTANCE FROM TOP OF TANK SHELL TO LIQUID: 3 FT.	
19. SHELL TYPE: <input type="checkbox"/> RIVETED <input checked="" type="checkbox"/> WELDED <input type="checkbox"/> OTHER(SPECIFY) _____	20. PAINT COLOR:	

VENT VALVE DATA

TYPE OF VENT	NUMBER OF VENTS	PRESSURE SETTING	DISCHARGE VENTED TO (ATMOSPHERE, FLARE, ETC.)
21. COMBINATION	a. 2	b. 5 PSIG	c. Emergency Relief to Relief Tank -
22. PRESSURE	a.	b. PSIG	c.
23. VACUUM	a.	b. PSIG	c.
24. OPEN	a. 2	b. - PSIG	c. To Condenser L-1 and L-2

FOR AGENCY USE ONLY

MATERIAL TO BE STORED

25. MATERIAL: Alkyds & Monomer Modified Alkyds	26. DENSITY: 7.5 - 8.8 LB/FT ³	27. VAPOR PRESSURE AT 70°F: 2.0 - 7.0mm Hg PSIA
---	--	---

STORAGE CONDITIONS

28. STORAGE TEMPERATURE: MINIMUM 180 °F MAXIMUM 300 °F	29. TANK TURN OVER PER YEAR: <input type="checkbox"/> EBLS/ <input type="checkbox"/> GALS/
30. MAXIMUM FILLING RATE: 3000 <input type="checkbox"/> EBLS/DAY <input checked="" type="checkbox"/> GALS/DAY	31. AVERAGE THROUGHPUT: 1500 <input type="checkbox"/> EBLS/DAY <input checked="" type="checkbox"/> GALS/DAY
32. PRESSURE EQUALIZERS USED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	33. PERMANENT SUBMERGED LOADING PIPE USED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
34. VAPOR LOSS CONTROL DEVICE? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	

IF VAPOR LOSS CONTROL DEVICE IS USED, COMPLETE "DATA & INFORMATION -- AIR POLLUTION CONTROL EQUIPMENT," (FORM APC-260), AS PART OF THIS APPLICATION.



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22.

RESIN PLANT ADDITION
DATA AND INFORMATION

PREFILTER OPERATION

AIR POLLUTION CONTROL EQUIPMENT

VENT CONDENSERS - ITEMS L-1 AND L-2

FOR AGENCY USE ONLY

1. NAME OF OWNER: The Sherwin-Williams Company	2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER): ..
3. STREET ADDRESS OF EMISSION SOURCE: 11541 S. Champlain Avenue	4. CITY OF EMISSION SOURCE: Chicago, Illinois 60628

ADSORPTION SYSTEM

1. FLOW DIAGRAM DESIGNATIONS OF ADSORPTION SYSTEMS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):		
2. MANUFACTURER:	3. MODEL NAME AND NUMBER:	
4. ADSORBANT:	5. NUMBER OF BEDS PER SYSTEM:	6. ADSORBANT WEIGHT PER BED: _____ LB
7. METHOD OF REGENERATION: <input type="checkbox"/> REPLACEMENT <input type="checkbox"/> STEAM <input type="checkbox"/> OTHER (SPECIFY _____)		
8. TIME ON LINE BEFORE REGENERATION: _____ MIN/BED	9. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE): _____ %	

AFTERBURNER

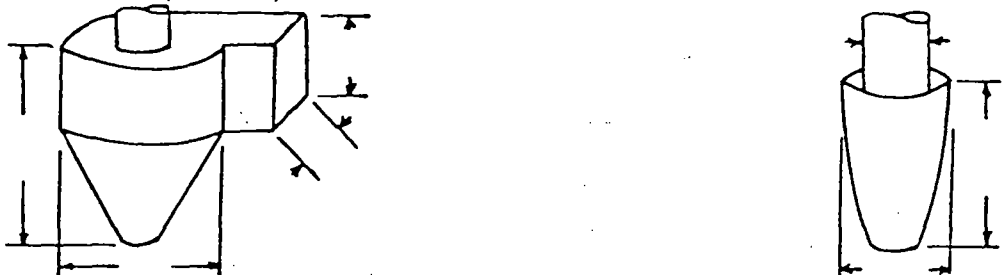
1. FLOW DIAGRAM DESIGNATIONS OF AFTERBURNERS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):	
2. MANUFACTURER:	3. MODEL NAME AND NUMBER:
4. FUEL: <input type="checkbox"/> GAS <input type="checkbox"/> OIL (_____ % SULFUR)	5. BURNERS PER AFTERBURNER _____ @ _____ BTU/HR EACH
6. INLET GAS TEMPERATURE: _____ °F	7. OPERATING TEMPERATURE OF COMBUSTION CHAMBER: _____ °F
8. COMBUSTION CHAMBER DIMENSIONS: LENGTH _____ IN; CROSS SECTION _____ IN x _____ IN; OR _____ IN DIA	
9. CATALYST USED? <input type="checkbox"/> YES <input type="checkbox"/> NO	10. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE): PARTICULATE _____ % GASEOUS _____ %

VENT CONDENSER - ITEMS L-1 AND L-2

CONDENSER

1. FLOW DIAGRAM DESIGNATIONS OF CONDENSERS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):		Items L-1 and L-2	
2. MANUFACTURER:		3. MODEL NAME AND NUMBER: CUSTOM	
4. TYPE OF COOLANT AND COOLANT FLOW PER CONDENSER: <input checked="" type="checkbox"/> WATER (_____ GPM) <input type="checkbox"/> AIR (_____ SCFM) <input type="checkbox"/> OTHER (TYPE _____ FLOW RATE _____)			
5. COOLANT TEMPERATURES: INLET 55 °F OUTLET 75 °F		6. GAS TEMPERATURES: INLET 180/300 °F OUTLET 100 °F	
7. HEAT EXCHANGE AREA PER CONDENSER: 300 FT ²		8. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE): See Attached	

CYCLONE

1. FLOW DIAGRAM DESIGNATIONS OF CYCLONES OR MULTIPLE CYCLONES DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):	
2. MANUFACTURER:	3. MODEL NAME AND NUMBER:
4. NUMBER OF CYCLONES IN EACH MULTIPLE CYCLONE:	5. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE):
6. DIMENSION THE APPROPRIATE SKETCH (IN INCHES) OR PROVIDE A DRAWING WITH EQUIVALENT INFORMATION:	
	

ELECTRICAL PRECIPITATOR

1. FLOW DIAGRAM DESIGNATIONS OF ELECTRICAL PRECIPITATORS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):	
2. MANUFACTURER:	3. MODEL NAME AND NUMBER:
4. COLLECTING ELECTRODE AREA PER CONTROL DEVICE: FT ²	5. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN RESULTS):

FILTER

1. FLOW DIAGRAM DESIGNATIONS OF FILTERS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):	
2. MANUFACTURER:	3. MODEL NAME AND NUMBER:
4. FILTERING AREA PER CONTROL DEVICE: FT ²	5. FILTERING MATERIAL:
6. CLEANING: <input type="checkbox"/> SHAKER <input type="checkbox"/> REVERSE AIR <input type="checkbox"/> PULSE AIR <input type="checkbox"/> PULSE JET <input type="checkbox"/> OTHER (SPECIFY _____)	
7. GAS COOLING: <input type="checkbox"/> BLEED-IN AIR (_____ SCFM) <input type="checkbox"/> WATER SPRAY (_____ GPM) <input type="checkbox"/> DUCT (LENGTH _____ FT; DIA _____ IN) <input type="checkbox"/> OTHER (SPECIFY _____)	
8. INLET GAS: TEMPERATURE _____ °F; DEW POINT _____ °F	9. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE):

SCRUBBER

1. FLOW DIAGRAM DESIGNATIONS OF SCRUBBERS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):	
2. MANUFACTURER:	3. MODEL NAME AND NUMBER:
4. SCRUBBER TYPE:	
<input type="checkbox"/> HIGH ENERGY (GAS STREAM PRESSURE DROP _____ IN H ₂ O)	
<input type="checkbox"/> PACKED (PACKING TYPE _____; PACKING SIZE _____ IN; PACKED HEIGHT _____ IN)	
<input type="checkbox"/> SPRAY (NUMBER OF NOZZLES _____; NOZZLE PRESSURE _____ PSIG)	
<input type="checkbox"/> OTHER (SPECIFY _____ ATTACH DESCRIPTION AND SKETCH WITH DIMENSIONED DETAILS)	
5. SCRUBBER GEOMETRY:	
LENGTH IN DIRECTION OF GAS FLOW _____ IN; CROSS-SECTION _____ IN X _____ IN OR _____ IN DIA; <input type="checkbox"/> CROSS FLOW <input type="checkbox"/> COUNTER FLOW	
6. LIQUID FLOW RATE INTO SCRUBBER: _____ GPM	7. CHEMICAL COMPOSITION OF SCRUBBANT:
8. INLET GAS TEMPERATURE: _____ °F	9. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE): PARTICULATE _____ % GASEOUS _____ %

OTHER TYPES OF CONTROL EQUIPMENT

1. FLOW DIAGRAM DESIGNATION OF CONTROL EQUIPMENT DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):		
2. GENERIC NAME OF CONTROL EQUIPMENT:	3. MANUFACTURER:	4. MODEL NAME AND NUMBER:
5. ATTACH DESCRIPTION AND SKETCH OF CONTROL EQUIPMENT WITH DIMENSIONED DETAILS AND FLOW RATES.		6. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE): PARTICULATE _____ % GASEOUS _____ %

MAXIMUM EMISSIONS FROM EACH IDENTICAL EXIT

CONTAMINANT	CONCENTRATION OR EMISSION RATE		METHOD USED TO DETERMINE CONCENTRATION OR EMISSION RATE
1. PARTICULATE MATTER	a. _____ GR/SCF	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	c. _____
2. CARBON MONOXIDE	a. _____ PPM (VOL)	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	c. _____
3. NITROGEN OXIDES	a. _____ PPM (VOL)	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	c. _____
4. ORGANIC MATERIAL	a. _____ PPM (VOL)	b. 2.82 <input type="checkbox"/> LB/10 ⁶ BTU <input checked="" type="checkbox"/> LB/HR	c. See Attached Calculation
5. SULFUR DIOXIDE	a. _____ PPM (VOL)	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	c. _____
6. OTHER (SPECIFY)	a. _____ PPM (VOL)	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	c. _____

EXHAUST DATA

1. FLOW DIAGRAM DESIGNATIONS OF EXITS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201): UE-4		2. GAS FLOW RATE THROUGH EACH EXIT: 0-2 ACFM	3. EXIT GAS TEMPERATURE: 90 °F
4. EXIT DIAMETER: 3" "	5. EXIT HEIGHT ABOVE GRADE: 65 FT	6. MAXIMUM HEIGHT OF NEARBY BUILDINGS: 56 FT	7. EXIT DISTANCE FROM NEAREST PLANT BOUNDARY: 150 FT

ALKYD AND MONOMER MODIFIED ALKYDSEMISSIONS FROM UE-4

- UE-4 - The batch from the reactor (Item G) would be deposited in the prefilter tank (Items M-1 and M-2) which would ordinarily contain a specified amount of solvent (primarily xylene). The batch would be approximately 4500 gallons and would be pumped into the prefilter tank in 60 minutes. Each batch will be in the prefilter tank for approximately 32 hours. Emissions will be the gas volume displaced by the batch.

FLOW OUT OF TANK

$$4500 \text{ Gallons} \left(\frac{1 \text{ ft}^3}{7.48 \text{ Gal}} \right) \left(\frac{1}{60 \text{ min}} \right) = 10.03 \frac{\text{CFM}}{\text{Hour}}$$

EMISSIONS FROM CONDENSER

10.03 CFM at atmospheric pressure, inert gases saturated with xylene at 90°F, xylene vapor pressure at 90°F is 13mm Hg.

$$10.03 \text{ CFM} \left(\frac{60 \text{ min}}{\text{hr}} \right) \left(\frac{13 \text{ mm}}{760 \text{ mm}} \right) \left(\frac{1 \text{ lb mole}}{387 \text{ ft}^3} \right) \left(\frac{106 \text{ lb}}{1 \# \text{ mole}} \right) = \frac{2.82 \text{ lbs}}{\text{hour}}$$



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RESIN PLANT ADDITION

PROCESS EMISSION SOURCE ADDENDUM

REACTOR, DRUM, TOWER OR HEAT EXCHANGER

HEAT EXCHANGER - ITEM H

FOR AGENCY USE ONLY

1. NAME OF OWNER:

The Sherwin-Williams Company

2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):

3. STREET ADDRESS OF EMISSION SOURCE:

11541 S. Champlain Avenue

4. CITY OF EMISSION SOURCE:

Chicago, Illinois 60628

Liquid VAPOR STREAM DATA

FLOW DIAGRAM DESIGNATION	NO. OF IDENTICAL STREAMS ON FLOW DIAGRAM	RATE PER STREAM	DISPOSITION (ATMOSPHERE ETC)	COMPOSITION					
				MAT'L	WT %	MAT'L	WT %	MAT'L	WT %
5a. Product Stream (Yellow)	b. 1	c. 120,000 LB/HR	d.	e.	f.	g.	h.	i.	j.
6a. Hot Oil Stream (Orange)	b. 1	c. 210,000 LB/HR	d.	e.	f.	g.	h.	i.	j.
7a.	b.	c. LB/HR	d.	e.	f.	g.	h.	i.	j.

SAFETY VALVE DATA

FLOW DIAGRAM DESIGNATION	NO. OF IDENTICAL VALVES	DESIGN DISCHARGE RATE PER VALVE	DISPOSITION (ATMOSPHERE ETC)	COMPOSITION					
				MAT'L	WT %	MAT'L	WT %	MAT'L	WT %
8a.	b.	c. LB/HR	d.	e.	f.	g.	h.	i.	j.
9a.	b.	c. LB/HR	d.	e.	f.	g.	h.	i.	j.
10a.	b.	c. LB/HR	d.	e.	f.	g.	h.	i.	j.



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RESIN PLANT ADDITION
DATA AND INFORMATION

FOR AGENCY USE ONLY

FUEL COMBUSTION EMISSION SOURCE(A)

ITEM Q - HOT OIL HEATER

1. NAME OF OWNER: The Sherwin-Williams Company	2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):
3. STREET ADDRESS OF EMISSION SOURCE: 11541 S. Champlain Avenue	4. CITY OF EMISSION SOURCE: Chicago, Illinois 60628

GENERAL INFORMATION		
5. FLOW DIAGRAM DESIGNATIONS OF EMISSION SOURCES DESCRIBED ON THIS FORM (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):		
6. MANUFACTURER: Vapor Corporation	7. MODEL NUMBER: OG-5932YHK-503	8. SERIAL NUMBER:
9. AVERAGE OPERATION TIME OF EMISSION SOURCE: 24 HRS/DAY 5 DAYS/WK 52 WKS/YR	10. PERCENT OF ANNUAL HEAT INPUT: DEC/FEB 25 % MAR/MAY 25 % JUN/AUG 25 % SEP/NOV 25 %	

GAS FIRING			
11. ORIGIN OF GAS: <input checked="" type="checkbox"/> PIPELINE <input type="checkbox"/> DISTILLATE FUEL OIL GASIFICATION <input type="checkbox"/> OTHER LIQUID FUEL GASIFICATION <input type="checkbox"/> SOLID FUEL GASIFICATION <input type="checkbox"/> BY-PRODUCT (SPECIFY SOURCE _____)			
12. MAXIMUM FIRING RATE: 6,300,000 BTU/HR	13. AVERAGE FIRING RATE: 620,000 BTU/HR	14. AVERAGE SULFUR CONTENT: 0 % BY WT	
15. ANNUAL CONSUMPTION: 114,000 SCF	16. AVERAGE HEAT CONTENT: 1,000 BTU/SCF	17. ARE YOU ON AN INTERRUPTABLE GAS SUPPLY? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

OIL FIRING			
18. MAXIMUM FIRING RATE: BTU/HR	19. AVERAGE FIRING RATE: BTU/HR	20. OIL GRADE NUMBER (1,2,4,5 or 6):	21. ANNUAL CONSUMPTION: GAL
22. AVERAGE HEAT CONTENT: BTU/GAL		23. AVERAGE SULFUR CONTENT: % BY WT	
24. DIRECTION OF FIRING: <input type="checkbox"/> HORIZONTAL <input type="checkbox"/> TANGENTIAL <input type="checkbox"/> OTHER (SPECIFY _____)			

(A) THIS DATA AND INFORMATION FORM IS TO BE COMPLETED FOR ANY FURNACE, BOILER, OR SIMILAR EQUIPMENT USED FOR THE PRIMARY PURPOSE OF PRODUCING HEAT OR POWER BY INDIRECT HEAT TRANSFER. FOR AN EMISSION SOURCE THAT DOES NOT FIT THIS DESCRIPTION, SUCH AS AN EMISSION SOURCE USING DIRECT HEATING, COMPLETE "DATA AND INFORMATION -- PROCESS EMISSION SOURCE," FORM APC-220. FOR A COMBUSTION APPARATUS IN WHICH REFUSE IS BURNED, COMPLETE "DATA AND INFORMATION -- INCINERATOR," FORM APC-250.

FOR AGENCY USE ONLY

SOLID FUEL FIRING

25. TYPE OF SOLID FUEL: <input type="checkbox"/> BITUMINOUS COAL <input type="checkbox"/> ANTHRACITE COAL <input type="checkbox"/> OTHER (SPECIFY _____)			
26. AVERAGE ASH CONTENT AS FIRED: _____ % BY WT		27. MAXIMUM FIRING RATE: _____ BTU/HR	
29. AVERAGE SULFUR CONTENT AS FIRED: _____ % BY WT		30. MOISTURE CONTENT AS FIRED: _____ BY WT	
31. AVERAGE HEATING VALUE AS FIRED: _____ BTU/LB		32. ANNUAL CONSUMPTION: _____ TONS	
33. TYPE OF FIRING:			
<input type="checkbox"/> PULVERIZED { <input type="checkbox"/> WET BOTTOM OR <input type="checkbox"/> DRY BOTTOM; <input type="checkbox"/> HORIZONTALLY OPPOSED OR <input type="checkbox"/> OTHER }			
<input type="checkbox"/> CYCLONE <input type="checkbox"/> SPREADER STOKER(_____ % REINJECTION) <input type="checkbox"/> OTHER (SPECIFY _____)			

UE-5

MAXIMUM EMISSIONS FROM EACH IDENTICAL SOURCE*

CONTAMINANT	CONCENTRATION OR EMISSION RATE		METHOD USED TO DETERMINE CONCENTRATION OR EMISSION RATE
34. PARTICULATE MATTER	a. .06 GR/SCF	b. .09 LB/10 ⁶ B	Typical emission factors for sources under 400 hp using natural gas.
35. CARBON MONOXIDE	a. 60 PPM (VOL)	b. .05 LB/10 ⁶ B	
36. NITROGEN OXIDES	a. 400 PPM (VOL)	b. .54 LB/10 ⁶ B	
37. ORGANIC MATERIAL	a. 60 PPM (VOL)	b. .03 LB/10 ⁶ B	
38. SULFUR DIOXIDE	a. 150 PPM (VOL)	b. 0.295 LB/10 ⁶ B	
39. OTHER (SPECIFY)	a. PPM (VOL)	b. LB/10 ⁶ B	c.

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EXHAUST DATA*

40. FLOW DIAGRAM DESIGNATIONS OF EXITS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):		41. MAXIMUM GAS FLOW RATE THROUGH EACH EXIT: 1500 ACFM	42. EXIT GAS TEMPERATURE: 480 °F
43. EXIT DIAMETER: 1.5 FT	44. EXIT HEIGHT ABOVE GRADE: 76' 6" FT	45. MAXIMUM HEIGHT OF NEARBY BUILDINGS: 56 FT	46. EXIT DISTANCE FROM NEAREST PLANT BOUNDARY: 150 FT

*NOTE: COMPLETE THESE SECTIONS ONLY IF EMISSIONS ARE EXHAUSTED WITHOUT CONTROL EQUIPMENT.



STATE OF ILLINOIS
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2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

RESIN PLANT ADDITION

PROCESS EMISSION SOURCE ADDENDUM

FOR AGENCY USE ONLY

TANK

ITEM P - EXPANSION TANK FOR ITEM Q

1. NAME OF OWNER: The Sherwin-Williams Company	2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):
3. STREET ADDRESS OF EMISSION SOURCE: 11541 S. Champlain Avenue	4. CITY OF EMISSION SOURCE: Chicago, Illinois 60628

TANK INFORMATION

5. NAME OF TANK MANUFACTURER: Custom	6. DESIGNATION OF TANK: ITEM P	
7. SERIAL NUMBER:	8. CAPACITY: 250 Gallons	
9. TANK USE: Therminol Expansion Tank	10. NUMBER OF SAME CAPACITY TANKS STORING SAME MATERIAL: One	
11. TANK SHAPE: <input type="checkbox"/> HORIZONTAL <input checked="" type="checkbox"/> CYLINDRICAL <input type="checkbox"/> SPHERICAL <input type="checkbox"/> OTHER(SPECIFY) _____		
12. TANK DIAMETER: FT	13. TANK HEIGHT: FT	14. TANK LENGTH: FT
15. STATUS: <input type="checkbox"/> EXISTING <input type="checkbox"/> ALTERATION	16. TANK TYPE: <input type="checkbox"/> PRESSURE <input type="checkbox"/> FIXED ROOF <input type="checkbox"/> FLOATING ROOF <input type="checkbox"/> OTHER(SPECIFY) _____	
17. SEAL: <input type="checkbox"/> SINGLE <input type="checkbox"/> DOUBLE <input type="checkbox"/> OTHER (SPECIFY) _____	18. AVERAGE DISTANCE FROM TOP OF TANK SHELL TO LIQUID: FT.	
19. SHELL TYPE: <input type="checkbox"/> RIVETED <input checked="" type="checkbox"/> WELDED <input type="checkbox"/> OTHER(SPECIFY) _____	20. PAINT COLOR:	

VENT VALVE DATA

TYPE OF VENT	NUMBER OF VENTS	PRESSURE SETTING	DISCHARGE VENTED TO (ATMOSPHERE, FLARE, ETC.)
21. COMBINATION	a.	b. PSIG	c.
22. PRESSURE	a.	b. PSIG	c.
23. VACUUM	a.	b. PSIG	c.
24. OPEN	a.	b. PSIG	c.

FOR AGENCY USE ONLY

THERMINOL 66

MATERIAL TO BE STORED

25. MATERIAL:

THERMINOL - HEATING MEDIA OIL

26. DENSITY:

63

LB/FT³

27. VAPOR PRESSURE AT 70°F:

0.1mm Hg @200°F PSI:

STORAGE CONDITIONS

28. STORAGE TEMPERATURE:

Ambient

MINIMUM

°F

MAXIMUM

°F

29. TANK TURN OVER PER YEAR:

Expansion Changes

☐ BBLS/☐ GALS/

30. MAXIMUM FILLING RATE:

Expansion Changes

☐ BBLS/DAY☐ GALS/DAY

31. AVERAGE THROUGHPUT:

☐ BBLS/DAY☐ GALS/DAY

32. PRESSURE EQUALIZERS USED?

☐ YES☐ NO

33. PERMANENT SUBMERGED LOADING PIPE USED?

Vent

☐ YES☐ NO

34. VAPOR LOSS CONTROL DEVICE?

☐ YES☒ NO

IF VAPOR LOSS CONTROL DEVICE IS USED, COMPLETE "DATA & INFORMATION -- AIR POLLUTION CONTROL EQUIPMENT," (FORM APC-260), AS PART OF THIS APPLICATION.

B.P. of oil is quite high; that is why it is used as a heating media.



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RESIN PLANT ADDITION

PROCESS EMISSION SOURCE ADDENDUM

TANK

ITEM J - EMERGENCY OVERFLOW TANK

FOR AGENCY USE ONLY

1. NAME OF OWNER:

2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):

3. STREET ADDRESS OF EMISSION SOURCE:

4. CITY OF EMISSION SOURCE:

TANK INFORMATION

5. NAME OF TANK MANUFACTURER:

Imperial Steel Tank Company

6. DESIGNATION OF TANK:

Item J

7. SERIAL NUMBER:

-

8. CAPACITY:

15,000 Gallons

9. TANK USE: Catch liquids discharged when
rupture disc relieves reactor or prefilter
tanks.10. NUMBER OF SAME CAPACITY TANKS STORING SAME MATERIAL:
One

11. TANK SHAPE:

☐ HORIZONTAL☒ CYLINDRICAL☐ SPHERICAL☐ OTHER(SPECIFY) _____

12. TANK DIAMETER:

9

FT

13. TANK HEIGHT:

FT

14. TANK LENGTH:

33

FT

15. STATUS:

New

☐

EXISTING

☐

ALTERATION

16. TANK TYPE:

☐ PRESSURE☐ FIXED ROOF☐ FLOATING ROOF☐ OTHER(SPECIFY) _____

17. SEAL:

☐

SINGLE

☐

DOUBLE

☐ OTHER (SPECIFY) None

18. AVERAGE DISTANCE FROM TOP OF TANK SHELL TO LIQUID:

FT.

Empty

19. SHELL TYPE:

☐ RIVETED☒

WELDED

☐ OTHER(SPECIFY) _____

20. PAINT COLOR:

White

VENT VALVE DATA

TYPE OF VENT

NUMBER
OF VENTS

PRESSURE SETTING

DISCHARGE VENTED TO
(ATMOSPHERE, FLARE, ETC.)

21. COMBINATION

a.

b.

PSIG

c.

22. PRESSURE

a.

b.

PSIG

c.

23. VACUUM

a.

b.

PSIG

c.

24. OPEN

a. 1

b.

PSIG

c. Open vent to atmosphere

FOR AGENCY USE ONLY

MATERIAL TO BE STORED

25. MATERIAL: Alkyds and Monomer Modified Alkyds	26. DENSITY: 7.5-8.5 lbs/gal 5.5-7.5	27. VAPOR PRESSURE AT 70°F: 2.0-7.0mm Hg 0.5-1.5
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STORAGE CONDITIONS

28. STORAGE TEMPERATURE: MINIMUM <u>Ambient</u> MAXIMUM _____ °F	29. TANK TURN OVER PER YEAR: 0	<input type="checkbox"/> BLS/ <input type="checkbox"/> GALS/
30. MAXIMUM FILLING RATE: <u>Emergency Only</u>	31. AVERAGE THROUGHPUT: 0	<input type="checkbox"/> BLS/DAY <input type="checkbox"/> GALS/DAY
32. PRESSURE EQUALIZERS USED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	33. PERMANENT SUBMERGED LOADING PIPE USED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
34. VAPOR LOSS CONTROL DEVICE? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		

IF VAPOR LOSS CONTROL DEVICE IS USED, COMPLETE "DATA & INFORMATION -- AIR POLLUTION CONTROL EQUIPMENT," (FORM APC-263), AS PART OF THIS APPLICATION.

